

## ABSTRACT

Novel mutated mammalian cells are provided that have been  
5 characterized by identifying the sequence of the genes that have  
been mutated. Preferably, novel mutated cells are murine ES  
cells that stably incorporate retroviral gene trap constructs in  
the specifically identified genes. The novel mutated cells and  
animals are useful in functional genomic analysis, and in the  
10 discovery and development of new therapeutic and diagnostics  
agents and methods.